IN THE SPECIFICATION:

Paragraph beginning at the bottom of page 11 and continuing to the middle of page 14 (as amended by applicants' preliminary amendment) has been further amended as follows:

Fig. 1 is a schematic structural view showing a near-field optical head according to Embodiment 1 of the present invention. More specifically, it illustrates a sectional structure of a recording medium and a position in accessing the recording medium. A slider 1 is supported by a suspension arm (not shown). The suspension arm and slider 1 constitute a flying head mechanism. The suspension arm has a voice coil motor (not shown) as its drive source to cause swing about a swing shaft. The slider 1 has a taper 1a provided at its scanning direction. The taper 1a, slider bottom surface 1b and recording medium 3 surface form an air passage 1c in a wedge film form. The slider 1 is applied by a load weight directed toward the recording medium 3 by the suspension arm and gimbals spring. The slider 1 is positioned on a track of the recording medium 3 through seek and following control. The slider 1 has a probe comprised of a hole in an inverted frustrum form as a light passage 5. Although in the present embodiment the light passage 5 is made in an inverted frustrum form, it may be in a rectangular parallelpiped or circular columnar form. The light passage 5

has one tip having a microscopic aperture 7 provided in the slider 1 bottom surface and an opposite tip covered by a light emitting element 2 bonded on a top surface of the slider 1. The recording medium 3 is formed thereon with a record region 4 to accommodate unit data. The slider bottom surface has a protruding portion 6 in the vicinity of the microscopic aperture 7 that is protruded from the slider 1 bottom surface toward the recording medium 3. Due to this, a distance h' between the microscopic aperture 7 and the recording medium 3 surface is smaller than a distance h between the slider bottom surface 1b and the recording medium 3 surface. The slider possessing such structure is manufactured by a semiconductor microlithography technique such as anisotropic etching. The light emitted by the light emitting element 2 is guided to the microscopic aperture 7 through the light path 5. Here, because the microscopic aperture 7 is smaller than a wavelength of light, a light field based on a near-field light is generated on the microscopic aperture 7 on a recording medium 3 side. This near-field light and the memory region 4 interact to effect recording/reading of data. The distance h between the bottom surface of the slider 1 and the surface of the recording medium 3 is typically several tens to several hundred nano-meters. Hence, there is difficulty in causing the near-field light to interact with the memory region 4 with sufficient intensity. However, because there is protrusion in

the vicinity portion 6 of the microscopic aperture 7, the microscopic aperture 7 is positioned in proximity to the surface of the recording medium 3. The intensity of the near-field light exponentially attenuates with respect to a distance from the microscopic aperture 7. Accordingly, it is critical to position the microscopic aperture 7 as close as possible to the memory region 4. With the structure of the present embodiment, the microscopic aperture 7 can be put in proximity to the surface of the recording medium 3. This makes it possible to cause a sufficient intensity of near-field light interaction, thus realizing a highly sensitive optical head. Also, the proximity of the microscopic aperture 7 to the surface of the recording medium 3 allows the memory region 4 on the surface of the recording medium 3 to be made small in area, realizing a high resolution optical head. Also, because the slider 1 and the recording medium 3 surface are structurally in contact only at the protruding portion 6 in the vicinity of the microscopic aperture 7, there is weakening in adsorption force created due to adsorption water or the like between the slider 1 and the recording medium 3. Thus, there is less mechanical damage to the slider 1 and recording medium 3 upon start and stop of head operation.

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